

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference H1-106DP3PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP00/04549	International filing date (day/month/year) 07 July 2000 (07.07.00)	Priority date (day/month/year) 08 July 1999 (08.07.99)
International Patent Classification (IPC) or national classification and IPC C12N 15/12, 5/10, 1/15, 1/19, 1/21, C12P 21/02, C07K 14/47, 16/18, C12Q 1/02, 1/68		
Applicant HELIX RESEARCH INSTITUTE		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of _____ sheets.</p>	
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input checked="" type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input checked="" type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>	

Date of submission of the demand 02 February 2001 (02.02.01)	Date of completion of this report 20 August 2001 (20.08.2001)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP00/04549

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☐ the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the claims:
pages _____, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the drawings:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☒ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☒ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application.
- ☒ claims Nos. 14,16

because:

- ☐ the said international application, or the said claims Nos. _____
relate to the following subject matter which does not require an international preliminary examination (*specify*):

- ☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 14,16
are so unclear that no meaningful opinion could be formed (*specify*):

The Examples and the like in the Specification do not disclose any specific compounds that bind to the proteins set forth in Claim 3 or compounds that regulate the incorporation of long-chain fatty acids into the cells expressing the proteins set forth in Claim 3, and there is no description elsewhere concerning what kinds of compounds are included in this group. Therefore, it is completely unclear what kinds of compounds are actually included, and the inventions set forth in the above Claims are not described clearly enough to render a meaningful opinion.

- ☐ the claims, or said claims Nos. _____ are so inadequately supported by the description that no meaningful opinion could be formed.
- ☐ no international search report has been established for said claims Nos. _____

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

- ☐ the written form has not been furnished or does not comply with the standard.
- ☐ the computer readable form has not been furnished or does not comply with the standard.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-13,15	YES
	Claims		NO
Inventive step (IS)	Claims	1-13,15	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-13,15	YES
	Claims		NO

2. Citations and explanations

Document 1: David Hirsch et al., "A family of fatty acid transporters conserved from mycobacterium to man," Proc. Natl. Acad. Sci. USA, Vol. 95, July 1998, pp. 8625-8629

Document 1 describes the identification of a human homologue corresponding to mouse FATP and a novel human homologue No. 6 that is most closely linked with FATP3 by screening the EST database using the FATP1-5 amino acid sequences of the mouse FATP family and using the mouse FATP sequence. Using a fragment of DNA that codes for a previously known protein as a probe and obtaining DNA that codes for other proteins such as a family of proteins that are linked to that protein, i.e., the so-called hybridization technique, is a well known technique to persons skilled in the art. Therefore, preparing a probe based on the mouse FATP1-5 amino acid sequences described in document 1 with the goal of obtaining FATP homologues in humans, screening a human cDNA library using the hybridization technique, and obtaining human homologues belonging to the FATP family is obvious to persons skilled in the art. Therefore, based on the description in document 1 and widely known techniques, the inventions set forth in these Claims are obvious to persons skilled in the art.

Furthermore, this examination finds that the inventions set forth in the above Claims provide no particularly outstanding effect that cannot be predicted from the description in document 1 and widely known techniques.

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VI. Certain documents cited

1. Certain published documents (Rule 70.10)

<u>Application No. Patent No.</u>	<u>Publication date (day/month/year)</u>	<u>Filing date (day/month/year)</u>	<u>Priority date (valid claim) (day/month/year)</u>
WO,99/46281,A2 [EX]	16 September 1999 (16.09.1999)	08 March 1999 (08.03.1999)	10 March 1998 (10.03.1998)
WO,99/36537,A2 [EX]	22 July 1999 (22.07.1999)	14 January 1999 (14.01.1999)	15 January 1998 (15.01.1998)

2. Non-written disclosures (Rule 70.9)

<u>Kind of non-written disclosure</u>	<u>Date of non-written disclosure (day/month/year)</u>	<u>Date of written disclosure referring to non-written disclosure (day/month/year)</u>